



HOPPECKE – YOUR PARTNER FOR SUSTAINABLE ENERGY SOLUTIONS

HOPPECKE
POWER FROM INNOVATION

RENEWABLE ENERGY PRODUCTS AND REFERENCES

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Accumulatorenwerke HOPPECKE

HOPPECKE Batterien	HOPPECKE China	HOPPECKE Batterie Systeme	HOPPECKE Technologies & ABT	HOPPECKE Service	HOPPECKE Metallhütte	HOPPECKE International
<p>Brilon, D Lead-acid-battery systems</p> <ul style="list-style-type: none"> ▪ R&D ▪ Production ▪ Sales ▪ Recycling of lead-acid industrial battery systems 	<p>Wuhan, CN Lead-acid-battery systems</p> <ul style="list-style-type: none"> ▪ Production ▪ Sales <p>Shanghai, CN Lead-acid-battery systems</p> <ul style="list-style-type: none"> ▪ Production ▪ Sales 	<p>Brilon, D Alkaline battery systems</p> <ul style="list-style-type: none"> ▪ R&D ▪ Production ▪ Sales ▪ Recycling of alkaline industrial battery systems 	<p>Zwickau, D Chargers, New Battery Technologies (Li-Ion), Systemtechnology</p> <ul style="list-style-type: none"> ▪ R&D ▪ Production 	<p>Zwickau, D Service</p> <ul style="list-style-type: none"> ▪ R&D ▪ Service for batteries and chargers ▪ Safety checks ▪ Systems advice ▪ On-site training 	<p>Brilon, D Recycling</p> <ul style="list-style-type: none"> ▪ Recycling of lead-acid batteries in our own smelter 	<p>Subsidiaries, worldwide</p> <ul style="list-style-type: none"> ▪ Production ▪ Sales ▪ Service

COMPANY

BUSINESS
UNIT

MOTIVE POWER SYSTEMS

Development, production und worldwide Sales
of motive power energy systems

RESERVE POWER SYSTEMS

Development, production und worldwide Sales
of stationary energy systems

SPECIAL POWER SYSTEMS

Development, production and worldwide Sales
of specialized applications in FNC[®] -, Li-Ion und NiMH-technology

SERVICE

Worldwide energy services



HOPPECKE locations world-wide



Production plants



Germany (Brilon)



Germany (Zwickau)



China (Wuhan)



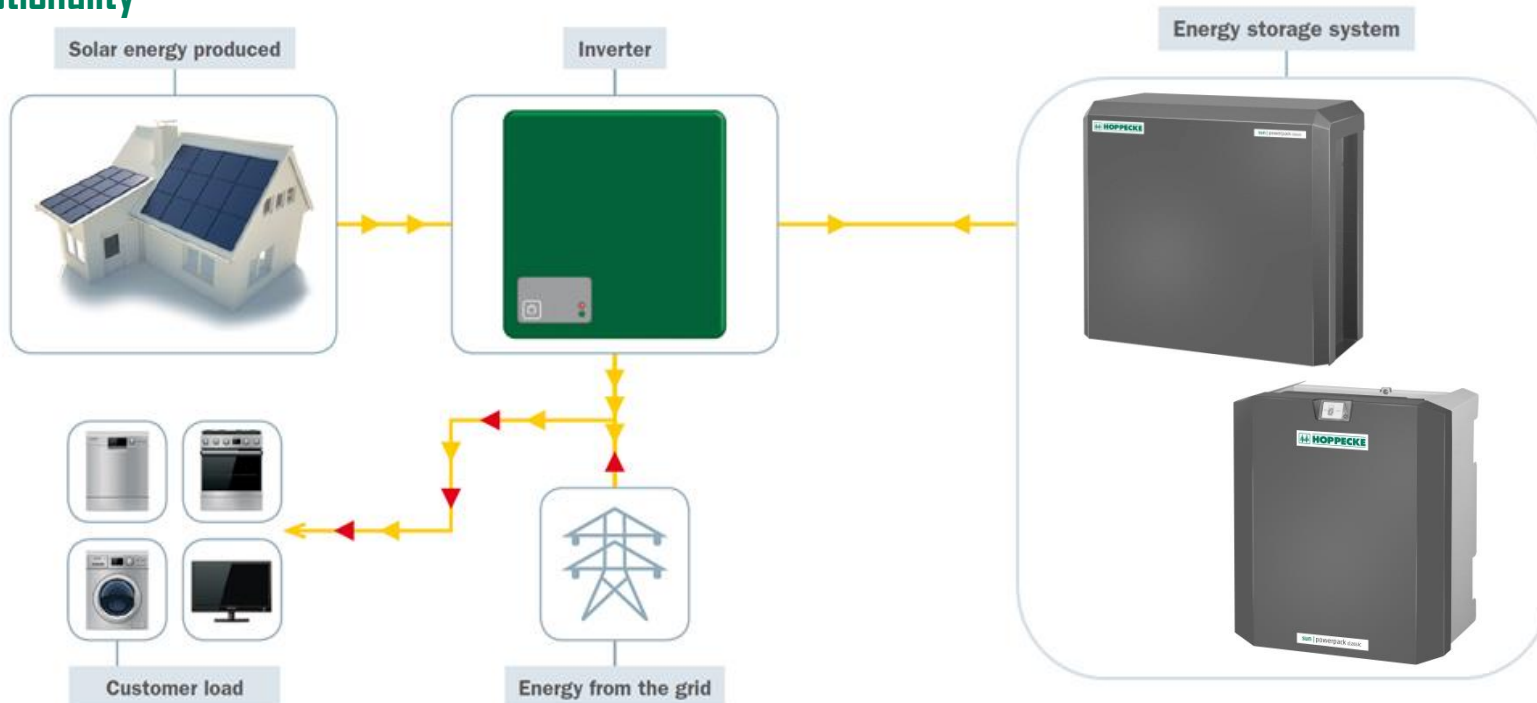
OUR MOTIVATION

- **Approx. 1-2 billion people in the world do not have any access to electricity**
- **Another 1-2 billion people in the world only have bad access to electricity**

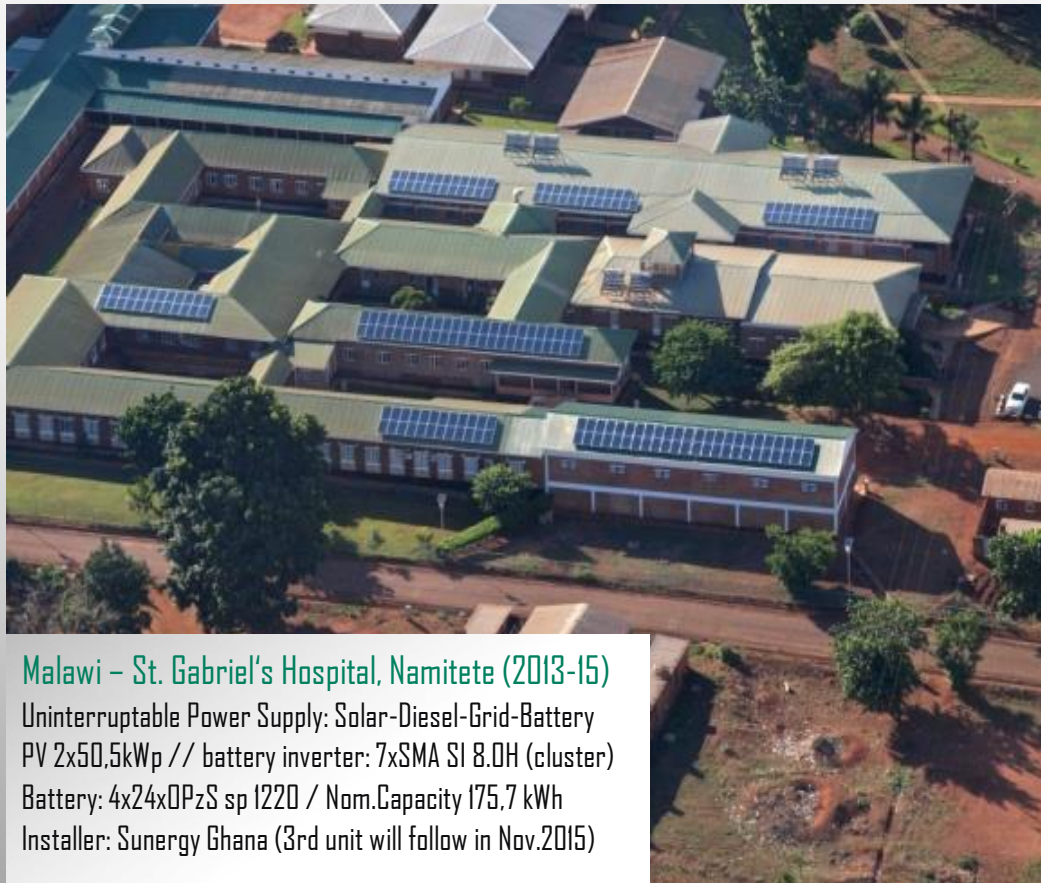
Sustainable Energy storage solutions



Functionality



- ▶ Photovoltaic energy
- ▶ Energy from the grid



Malawi – St. Gabriel's Hospital, Namitete (2013-15)

Uninterruptable Power Supply: Solar-Diesel-Grid-Battery
PV 2x50.5kWp // battery inverter: 7xSMA SI 8.0H (cluster)

Battery: 4x24xDPzS sp 1220 / Nom.Capacity 175.7 kWh

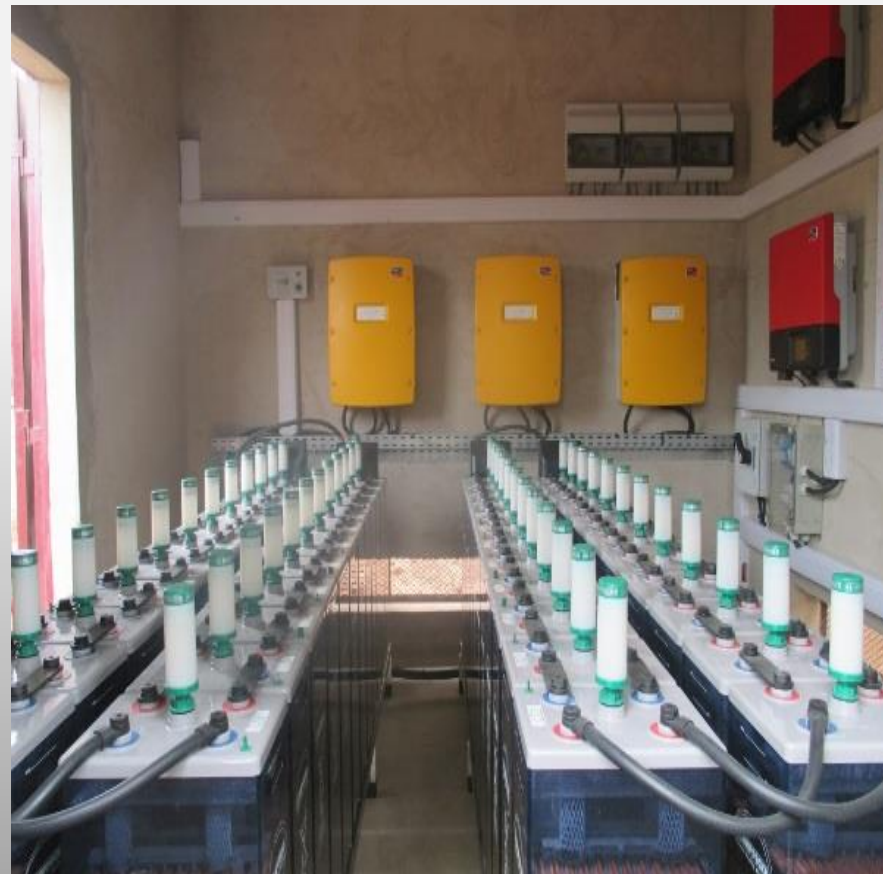
Installer: Sunergy Ghana (3rd unit will follow in Nov.2015)





Tschad – Center Culturel Nicodeme, Pala (2015)

Uninterruptable Power Supply: Solar-Diesel-Battery
PV 29 kWp // battery inverter: 6xSMA SI 8.0H (cluster)
Battery: 24xOPzS sp 1670 / Nom.Capacity 60,3 kWh
Installer: Sunergy Ghana (handover to CCN incl. training)





Tschad – CEFOD and CAK, Education Center 2013

Uninterruptable Power Supply: Solar-Diesel-Grid-Battery

PV 9,87kWp // battery inverter: 3xSMA SI 5048 (cluster)

Battery: 2x24xDPzS sp 1520 / Nom.Capacity 109,44 kWh

Installer: Sunergy Ghana





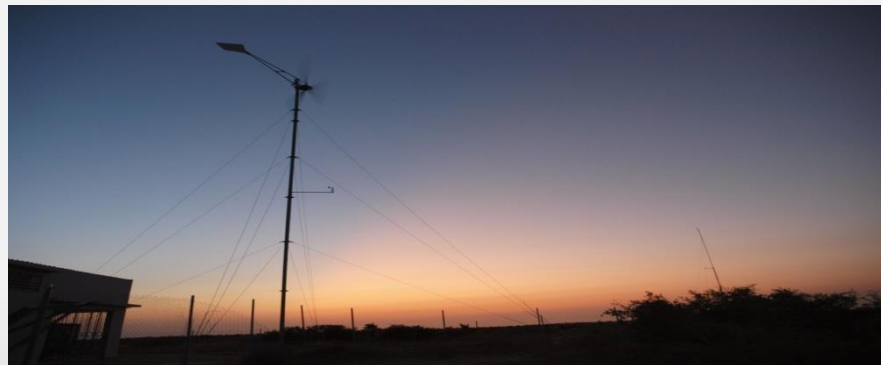
Senegal – Sine Moussa Abdou (2010)

Rural electrification for 900 people: Solar-Wind-Battery

PV 5 kWp // Wind 11kVA // battery inverter: 3xSMA SI 5048

Battery: 24xOPzS sp 4700 / Nom.Capacity 167,4 kWh

Installer: Inensus, Germany





Ghana - Lodge Prampram (2015)

Uninterruptable Power Supply: Solar-Grid-Battery

PV 22,5 kWp // battery inverter: 3xSMA SI 6.0H (cluster)

Battery: 24xOPzV sp 2900 / Nom.Capacity 123,55 kWh

Installer: TRADEWORKS, Ghana



Ghana, Regiemanuel Estate Kwabenya (2013)

Uninterruptable Power Supply: Solar-Grid-Battery

PV 2,8 kWp // battery inverter: SMA SI 2224

Battery: 24xDPzV sp 520 / Nom.Capacity 11,28 kWh

Installer: TRADEWORKS, Ghana





Ghana - Emefs Estate, Afienya (2015)

Uninterruptable Power Supply: Solar-Grid-Battery

PV 1,4 kW_p // battery inverter: SMA SI 2224

Battery: 24xOPzV sp 520 / Nom.Capacity 11,28 kWh

Installer: TRADEWORKS, Ghana



Ghana, Accra – Bank, head office Legon

Uninterruptable Power Supply: Solar-Grid-Battery
PV 22,5 kWp // battery inverter: 3xSMA SI 6.0H (cluster)

Battery: 24x0PzS sp 1520 / Nom.Capacity 54,7 kWh

Installer: TRADEWORKS, Ghana

THANK YOU



**Thank you
for
your
attention!**

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